

Claims:

1. A formula feed for administration to a human or animal, the formulation including active xanthine oxidoreductase (XOR).

2. A formula feed according to claim 1, which includes at least 50 $\mu$ g/ml active xanthine oxidoreductase.

<sup>sub #1</sup> 3. A formula feed according to claim 1 or claim 2, in which the concentration of XOR exceeds the normal physiological concentration of XOR.

4. A formula feed according to any one of claims 1 to 3, which includes up to 500 $\mu$ g/ml active xanthine oxidoreductase.

5. A formula feed according to claim 4, in which the formulation includes from 50 to 150 $\mu$ g/ml of XOR.

<sup>sub #2</sup> 6. A formula feed according to any one of claims 1 to 5, in which the formulation includes buttermilk, the buttermilk including active XOR.

7. A formula feed according to any one of claims 1 to 6, in which the formulation is in liquid form.

8. A formula feed according to any one of claims 1 to 7, the formulation further including one or more electron donors.

9. A formula feed according to any one of claims 1 to 8, the formulation further including one or more electron acceptors.

10. A formula feed according to any one of claims 1 to 9, which is suitable for feeding a human infant.

11. A combination product for use in the preparation of a formula feed according to any one of claims 1 to 10, in which the product comprises two separate portions, the first portion including active XOR and the second portion

being sterilised and comprising substantially no active XOR.

12. A combination product according to claim 11, in which the second portion is in the form of a powder.

13. A combination product according to claim 11 or claim 12, in which the second portion has been heat treated.

14. A combination product according to any one of claims 11 to 13, in which the first portion has been pasteurised.

15. A combination product according to any one of claims 11 to 14, in which the first portion is in a first container, and the second portion is in a second container

16. A composition for use in the treatment of gastrointestinal infection, the composition being suitable for addition to a formula feed, and the composition comprising active XOR in combination with one or more electron donors and/or one or more electron acceptors.

17. A composition according to claim 16, the composition comprising buttermilk.

18. A composition according to claim 16 or claim 17, the composition being in the form of a powder.

19. A method of making a formula feed, the method comprising the step of adding a composition comprising active XOR.

20. A method according to claim 19, the composition being according to any one of claims 16 to 18.

21. A method according to claim 19 or claim 20, the method comprising the steps of:

a. preparing a first portion of the formula feed, comprising a composition including active XOR; and

b. preparing a second portion of the formula feed, the first portion and second portion being separate from each other for subsequent mixing to form the formula feed.

22. A method according to claim 21, in which the  
5 first portion comprises lyophilised buttermilk.

23. A method according to claim 21, in which the first portion comprises buttermilk that has been spray-dried at a temperature which is so selected that the activity of the XOR is at least substantially retained.

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24. A method according to any one of claims 21 to 23, in which the first portion has been subjected to a heat treatment step in which its temperature does not exceed 65°C.

25. A method according to claim 21 or claim 22, in  
15 which the second portion comprises a sterilised feed composition.

26. A formulation for use in the treatment of gastrointestinal infection, the formulation being suitable for administration as a feed and including active xanthine  
20 oxidoreductase.

27. Use of active XOR in the treatment of gastrointestinal (GI) infection.

28. Use of active XOR in the treatment of Scours disease.

25 29. Use of active XOR in the killing of bacteria.

30. Method of feeding a patient with enteral feed, in which the enteral feed includes active XOR.

31. Method of feeding an infant with formula feed, in which the formula feed includes active XOR.

30 32. A formulation comprising XOR substantially as described in Example 1 herein.

33. A formulation for use as a bactericidal agent in the human or animal digestive system, the formulation including active xanthine oxidoreductase (XOR).

34. A feed formulation according to claim 33, which  
5 is suitable for use as an enteral feed.

35. A feed formulation according to claim 33, which is for use in the treatment of Scours disease.

10

**THE UNIVERSITY OF CHICAGO**

IN THE CLAIMS

Please amend the following claims (marked-up copy attached):

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3. (Amended) A formula feed according to claim 1, in which the concentration of XOR exceeds the normal physiological concentration of XOR.

4. (Amended) A formula feed according to claim 1, which includes up to 500µg/ml active xanthine oxidoreductase.

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6. (Amended) A formula feed according to claim 1, in which the formulation includes buttermilk, the buttermilk including active XOR.

7. (Amended) A formula feed according to claim 1, in which the formulation is in liquid form.

8. (Amended) A formula feed according to claim 1, the formulation further including one or more electron donors.

9. (Amended) A formula feed according to claim 1, the formulation further including one or more electron acceptors.

10. (Amended) A formula feed according to claim 1, which is suitable for feeding a human infant.

11. (Amended) A combination product for use in the preparation of a formula feed according to claim 1, in which the product comprises two separate portions, the first portion including active XOR and the second portion being sterilized and comprising substantially no active XOR.

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13. (Amended) A combination product according to claim 11, in which the second portion has been heat treated.

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14. (Amended) A combination product according to claim 11, in which the first portion has been pasteurized.

15. (Amended) A combination product according to claim 11, in which the first portion is in a first container, and the second portion is in a second container.

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18. (Amended) A composition according to claim 16, the composition being in the form of a powder.

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20. (Amended) A method according to claim 19, a composition for use in the treatment of gastrointestinal infection, the composition being suitable for addition to a formula feed, and the composition comprising active XOR in combination with one or more electron donors and/or one or more electron acceptors.

21. (Amended) A method according to claim 19, the method comprising the steps of:

a. preparing a first portion of the formula feed, comprising a composition including active XOR; and

b. preparing a second portion of the formula feed, the first portion and second portion being separate from each other for subsequent mixing to form the formula feed.

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24. (Amended) A method according to claim 21, in which the first portion has been subjected to a heat treatment step in which its temperature does not exceed 65° C.

25. (Amended) A method according to claim 21, in which the second portion comprises a sterilized feed composition.

Please add the following new claims:

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36. (New) A method according to claim 19, a composition comprising of buttermilk.